

Application No.: 10/552,516

Docket No.: JCLA17841

In The Claims:

Claim 1. (currently amended) A repair or reinforcement system of an existing structure using a reaction force of pressurizing means, comprising:

a ground including an existing foundation structure having a hole;

a pressure bearing body separately installed in the vicinity of a target portion for repair or reinforcement of the existing structure or being the existing structure itself;

structure supporting means for supporting the existing structure between the ground and the pressure bearing body; [[and]]

pressurizing means for exerting an artificial pressure on the pressure bearing body in a state in which one end thereof is supported on an upper end of the structure supporting means, to press fit the structure supporting means into the ground using a reaction force generated in a direction opposite to a direction in which the pressure is applied; and

wherein the separately installed pressure bearing body is a frame assembly, comprising:

bearing members installed a predetermined distance above the existing foundation structure and bearing the pressure of the pressurizing means;

support members each having one end supported to the bearing member and the other end supported to the existing foundation structure; and

anchor members each having one end fixed to the existing foundation structure and the other end fixed to the bearing member, the anchor members being formed between each of the support members.

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Claim2. (cancelled)

Claim3. (currently amended) The repair or reinforcement system of claim [[2]] 1, wherein jack supporters are further installed between each of the support members and the existing foundation structure and are driven to allow the support members to apply a pressure to the bearing members upwardly as the support members are elongated, and the bearing members restrained to the existing foundation structure by the anchor members are tightly fixed to the existing foundation structure together with the support member by a reaction force of the jack supporters.

Claim4. (currently amended) The repair or reinforcement system of claim [[2]] 1, wherein the anchor members are fixed to the bearing members such that one end of each of the anchor members is inserted into a hole for the anchor member in the existing foundation structure, followed by filling a filler material to be fixed, and the other end of the anchor member upwardly penetrates through the bearing member to be fastened by an anchorage nut.

Claim 5. (original) The repair or reinforcement system of claim 1, wherein the pressurizing means comprises a hydraulic jack or a jack support, and the structure supporting means is continuously pressed fit into the ground by a predetermined length by inserting a pressure bearing plate into the upper end of the pressurizing means and continuously driving the pressurizing means.

Claim 6. (cancelled)

Claim 7. (currently amended) A repair or reinforcement method of an existing structure using a reaction force of pressurizing means, comprising:

installing a frame assembly in the vicinity of the existing structure;

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forming a hole in an existing foundation structure contacting a ground and inserting [[the]]
a structure supporting means into the hole, the structure supporting means having an upper portion
spaced a predetermined distance from the frame assembly;

installing pressurizing means at a space formed between the upper portion of the structure
supporting means and the existing structure, and driving the pressurizing means to apply a reaction
force generated by pressurizing the existing structure by elongation of the pressurizing means to
allow the structure supporting means to be pressed fit into the ground; [[and]]

integrally forming the structure supporting means with the existing structure and
completing a necessary repair or reinforcement work when the structure supporting means is
continuously pressed fit into the ground to a predetermined depth so as to support the existing
structure, the frame assembly being a pressure bearing body of generating a reaction force based on
the pressurizing means; and

wherein the frame assembly comprises bearing members installed a predetermined distance
above the existing foundation structure and bearing the pressure of the pressurizing means, support
members each having one end supported to the bearing member and the other end supported to the
existing foundation structure, and anchor members each having one end fixed to the existing
foundation structure and the other end fixed to the bearing member.

Claim 8. (cancelled)

Claim 9. (currently amended) The repair or reinforcement method of claim [[8]] 7, wherein
jack supporters are further installed between each of the support members and the existing
foundation structure and are driven to allow the support members to apply a pressure to the bearing

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members upwardly as the support members are elongated, and the bearing members restrained to the existing foundation structure by the anchor members are tightly fixed to the existing foundation structure together with the support member by a reaction force of the jack supporters.

Claim 10. (currently amended) The repair or reinforcement method of claim [[8]] 7, wherein the anchor members are fixed to the bearing members such that one end of each of the anchor members is inserted into a hole for the anchor member in the existing foundation structure, followed by filling a filler material to be fixed, and the other end of the anchor member upwardly penetrates through the bearing member to be fastened by an anchorage nut.

Claim 11. (currently amended) The repair or reinforcement system of claim [[8]] 7, wherein the pressurizing means comprises a hydraulic jack or a jack support, and the structure supporting means is continuously pressed fit into the ground by a predetermined length by inserting a pressure bearing plate into the upper end of the pressurizing means and continuously driving the pressurizing means.